

REMARKS

Claims 1-25 are now pending in this application. Claims 1, 13, 18, and 21 are independent. Claims 13 and 18 have been amended, and claims 21-25 have been added. No claims have been canceled by this Amendment. No new matter is involved with any claim amendment or new claim.

Anticipation Rejection By Yamaguchi et al.

Withdrawal of the rejection of claims 13-17 under 35 U.S.C. §102(b) as being anticipated by Yamaguchi et al. (US 5,268,883) is requested.

Applicant notes that anticipation requires the disclosure, in a prior art reference, of each and every limitation as set forth in the claims.¹ There must be no difference between the claimed invention and reference disclosure for an anticipation rejection under 35 U.S.C. §102.² To properly anticipate a claim, the reference must teach every element of the claim.³ “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference”.⁴ “The identical invention must be shown in as complete detail as is contained in the ...claim.”⁵ In determining anticipation, no claim limitation may be ignored.⁶

Discussion of Yamaguchi et al.

Referring to column 8, lines 9-23 of Yamaguchi et al., access detection circuit 30 compares the counted-down value from the counter 25 with a set reference value representing the number of tracks between the target track and a boundary track which is located at the end of ROM area and at the beginning of adjacent recording area RD. It appears that access detection

¹ *Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985).

² *Scripps Clinic and Research Foundation v. Genentech, Inc.*, 18 USPQ2d 1001 (Fed. Cir. 1991).

³ See MPEP § 2131.

⁴ *Verdegaal Bros. v. Union Oil Co. of Calif.*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

⁵ *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

circuit 30 either outputs a high level signal or a low level signal to microcomputer 26 based on the counted-down value, and the counter 25 counts down each time that the beam crosses a track to obtain the counted-down value. Therefore, the counted-down value does not depend on the reflective ratio on the optical disk.

Yamaguchi et al. disclose that the devices process the derived signals in different manners when the signals are derived from a ROM area RM or a recording area RD. Referring to column 3, lines 8-10, some information is recorded in the ROM area RM in advance by the formation of a number of pits. It appears that both of the ROM area RM and the recording area RD are regarded as the data areas.

Thus, in contrast to Applicants' disclosed and claimed invention, Yamaguchi et al. fail to disclose using different methods for processing the signals derived from the blank area and the data area.

Specific Deficiencies of Yamaguchi et al.

With respect to independent claim 13, the claimed invention chooses signal processing steps to output a signal based upon the reflective ratio on the optical disk where the pick-up head resides, and Yamaguchi et al. fail to disclose this feature.

In particular, the applied art does not disclose a method for switching servo gains and offsets for an optical disk drive, wherein the method includes, among other features, "determining the location of a pick-up head on an optical disk having respective areas thereon with low and high reflective ratios; outputting a signal obtained by multiplying a servo signal by a first gain if the pick-up head is at a location with a low reflective ratio on the optical disk; and outputting a normalized signal obtained by multiplying the servo signal by a second gain smaller than the first gain if the pick-up head is at a location on the optical disk with a high reflective ratio", as recited in independent claim 13, as amended.

⁶ *Pac-Tex, Inc. v. Amerace Corp.*, 14 USPQ2d 187 (Fed. Cir. 1990).

Regarding Claim 15, the outputted servo signal is obtained from the conversion of the first gain or the second gain based on whether the location of the pick-up head is a blank area, or a data area.

The applied art does not disclose a method “wherein the outputted servo signal is from the conversion of the first gain when the pick-up head is in a blank area, and the outputted servo signal is from the conversion of the second gain when the pick-up head is in a data area”, as recited in dependent claim 15.

Accordingly, since the applied art does not disclose all the limitations of independent claim 13, withdrawal of the rejection and allowance of claims 13-16 are requested.

Anticipation Rejection By Ohshima

Withdrawal of the rejection of claims 18-20 under 35 U.S.C. §102(b) as being anticipated by Ohshima (US 5,436,877) is requested. The legal requirements for anticipation have been set forth above.

Discussion of Ohshima

Referring to column 4, lines 37-42 and 53-59, Ohshima discloses that a tracking error signal Et provided with a servo gain given by the amplifier G₂ is applied to the tracking driver 13 for performing a tracking servo positioning operation, and the tracking error signal with a servo gain given by the amplifier G₁ is applied to the tracking driver 13 for performing track-following operation. Accordingly, a tracking servo gain is raised by the amplifier G₂ to shorten the tracking servo positioning time and stabilize the positioning operation. It appears that all of the amplifiers G₁ and G₂ are for the tracking operation rather than the seeking operation.

Specific Deficiencies of Ohshima

Claim 18 recites choosing between two signal processing steps to output a signal based on the pick-up head status, i.e., a “tracking status” or a “seeking status”. Furthermore, the first gain has a smaller relative gain and is used with the signal associated with the tracking status and the second, larger gain is used with the signal associated with the seeking status.

Specifically, the applied art does not disclose a method for switching servo gains and offsets for an optical disk drive which includes, among other features, “...outputting a signal after converting a servo signal by a first gain if the pick-up head is in a tracking status; and outputting a normalized signal with respect to a level of the converted servo signal by multiplying the servo signal by a second gain greater than the first gain if the pick-up head is in a seeking status”, as recited in independent claim 18, as amended.

As a further example of patentability, and with regard to dependent claims 19-20, Ohshima fails to disclose how to determine the value of the servo gain given by either the amplifier G_1 or the amplifier G_2 . However, claims 19-20 recite that the first gain and the second gain are determined by the on-line detection or the off-line detection of the servo signal. Consequently, these claims can not be anticipated and thus should be allowed.

Accordingly, since the applied art does not disclose all the limitations of independent claim 18, withdrawal of the rejection and allowance of claims 18-20 are requested.

Anticipation Rejection By Tsai

Withdrawal of the rejection of claims 18-20 under 35 U.S.C. §102(e) as being anticipated by Tsai (US 7,092,323) is requested. The legal requirements for anticipation have been set forth above.

Discussion of Tsai

Tsai discloses a focus control method for an optical pickup head. Referring to column 4, lines 13-21, the first compensator 331 is selected to output the focus control signal Foo with the *low gain in the first operating mode* when the optical pickup head is situated in *a tracking condition*, and the second compensator 332 is selected to output the focus control signal Foo with the *second, higher gain in the second operating mode* when the optical pickup head is situated *in a seeking condition*. However, Tsai fails to disclose that the outputting level of the second compensator 332 refers to that of the first compensator 331.

In addition, and more importantly, Tsai discloses at col. 2, lines 35-43 that the first compensator is selected to output the focus control signal with a first gain when the optical pick-up head is in a tracking condition, and that *the second compensator is selected to output the focus control signal with a second gain larger than the first gain when the optical pick-up head is in a seeking condition*. This is exactly opposite to Applicants' recitation in amended claim 18, as discussed below.

Specific Deficiencies of Tsai

Claim 18 recites choosing between two signal processing steps to output a signal based on the pick-up head status, i.e., a "tracking status" or a "seeking status". Furthermore, the first gain has a larger relative gain and is used with the signal associated with the tracking status and the second, smaller gain is used with the signal associated with the seeking status. As indicated above, this is in direct opposition to the disclosure of Tsai.

Specifically, the applied art does not disclose a method for switching servo gains and offsets for an optical disk drive which includes, among other features, "...outputting a signal after converting a servo signal by a first gain if the pick-up head is in a tracking status; and outputting a normalized signal with respect to a level of the converted servo signal by multiplying the servo signal *by a second gain less than the first gain if the pick-up head is in a seeking status*", as recited in independent claim 18, as amended.

Further, Tsai fails to disclose how to determine the compensation offset given by either the first compensator 331 or the second compensator 332. Thus, Tsai also does not anticipate claims 19-20 which recite that the first gain and the second gain are determined by the on-line detection or the off-line detection of the servo signal. Consequently, these claims are also not anticipated.

Accordingly, since the applied art does not disclose all the limitations of independent claim 18, withdrawal of the rejection and allowance of claims 18-20 are requested.

Allowable Subject Matter

Applicants note with appreciation that claims 1-12 have been allowed.

New Claims

Newly-presented independent claim 21-25 have been drafted to avoid the applied art and to further define that which Applicants regard as their invention. No new matter is involved with new claims 21-25. Consideration and allowance of claim 21 are requested.

Conclusion

In view of the above amendments and remarks, Applicants believe that each of pending claims 1-25 in this application is in immediate condition for allowance. An early indication of the same would be appreciated.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number indicated below.

For any fees that are due, including fees for excess claims and for any required extensions of time during the pendency of this application, please charge CBLH Deposit Account No. 22-0185, under Order No. 22171-00017-US1 from which the undersigned is authorized to draw.

Dated: January 8, 2007 (Monday)

Respectfully submitted,

Electronic signature: /Larry J. Hume/
Larry J. Hume
Registration No.: 44,163
CONNOLLY BOVE LODGE & HUTZ LLP
1990 M Street, N.W., Suite 800
Washington, DC 20036
(202) 331-7111
(202) 293-6229 (Fax)
Attorney for Applicant